

AMENDMENTS TO CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1 1. (Currently amended) A database appliance, comprising:
2 a database server; and
3 a special purpose operating system, generated by modifying a general purpose
4 operating system, whose configuration is dictated based on a set of services
5 required by the database server,
6 wherein the special purpose operating system is the only operating system installed
7 on and executed by the database appliance.
- 1 2. (Original) The database appliance of Claim 1, wherein the database server was
2 generated from another database server by modifying the code of the other database
3 server to optimize the code for execution on said database appliance.
- 1 3. (Original) The database appliance of Claim 1, wherein the hardware for said database
2 appliance is selected and configured to optimize performance of one or more services
3 to be performed by the database server.
- 1 4. (Original) The database appliance of Claim 1, wherein the hardware for said database
2 appliance is selected and configured to optimize a cache hit ratio experienced by the
3 database appliance.

1 5. (Original) The database appliance of Claim 1, wherein the database server is a special
2 purpose database server, wherein features and configuration of the special purpose
3 operating system are dictated by the special purpose database server and supporting
4 components, and wherein the special purpose database server is specially adapted
5 based upon the services required by a specific type of database usage.

1 6. (Original) The database appliance of Claim 1, wherein the special purpose operating
2 system performs process scheduling based on shares of CPU time.

1 7. (Original) The database appliance of Claim 1, further comprising:
2 a self-configuration module that is capable of performing the steps of:
3 detecting an environment in which the database appliance is being used; and
4 configuring the database appliance based upon the detected environment.

1 8. (Original) The database appliance of Claim 1, wherein the special purpose operating
2 system employs a microkernel and an associated service module.

1 9. (Original) The database appliance of Claim 1, wherein the database server includes a
2 mechanism for reading resource information within an address space of a kernel of
3 the operating system without causing a context switch to the operating system kernel
4 address space.

1 10. (Original) The database appliance of Claim 5, wherein said type of database usage is
2 one of an online transaction processing application and an online analytical
3 processing application, wherein said database appliance is configured with an amount
4 of resources dedicated to I/O services that is based on whether said specific type of

5 database usage is an online transaction processing application or an online analytical
6 processing application, and wherein said database appliance is configured with an
7 amount of resources dedicated to computational services that is based upon whether
8 said specific type of database usage is an online transaction processing application or
9 an online analytical processing application.

1 11. (Original) The database appliance of Claim 5, wherein said specific type of database
2 usage is an online transaction processing application and said database appliance is
3 configured with relatively more resources dedicated to I/O services and relatively
4 fewer resources dedicated to computational services.

1 12. (Original) A database appliance, comprising:
2 an operating system; and
3 a database server generated from another database server by modifying the code of
4 said other database server to optimize the code for execution on said database
5 appliance,
6 wherein the database server obtains services of said operating system by making calls
7 to said operating system during execution of said database server.

1 13. (Original) The database appliance of Claim 12, wherein said operating system is a
2 special purpose operation system whose code has been optimized for use as part of
3 said database appliance.

1 14. (Original) The database appliance of Claim 12, further comprising:
2 a self-configuration module that is capable of performing the steps of:
3 detecting an environment in which the database appliance is being used; and

4 configuring the database appliance based upon the detected environment.

1 15. (Original) The database appliance of Claim 12, wherein the database appliance
2 allocates a CPU share for a process and assigns a priority to the process based on the
3 changing resource demands associated with the process.

1 16. (Currently amended) A method for constructing a database appliance, comprising:
2 installing on a computer readable medium accessible to one or more processors a
3 database server; and
4 installing on the computer readable medium a special purpose operating system,
5 generated by modifying a general purpose operating system, whose
6 configuration is dictated based on a set of services required by the database
7 server,

8 wherein the special purpose operation system is the only operating system installed
9 on and executed by the database appliance.

1 17. (Original) The method of Claim 16, wherein the database server was generated from
2 another database server by modifying the code of the other database server to
3 optimize the code for execution on said database appliance.

1 18. (Original) The method of Claim 16, wherein the hardware for said database appliance
2 is selected and configured to optimize performance of one or more services to be
3 performed by the database server.

1 19. (Original) The method of Claim 16, wherein the hardware for said database appliance
2 is selected and configured to optimize a cache hit ratio experienced by the database
3 appliance.

- 1 20. (Original) The method of Claim 16, wherein the database server is a special purpose
2 database server, wherein features and configuration of the special purpose operating
3 system are dictated by the special purpose database server and supporting
4 components, and wherein the special purpose database server is specially adapted
5 based upon the services required by a specific type of database usage.
- 1 21. (Original) The method of Claim 16, wherein the special purpose operating system
2 performs process scheduling based on shares of CPU time.
- 1 22. (Original) The method of Claim 16, wherein the method further comprises:
2 installing on the computer readable medium a self-configuration module that is
3 capable of performing the steps of:
4 detecting an environment in which the database appliance is being used; and
5 configuring the database appliance based upon the detected environment.
- 1 23. (Original) The method of Claim 16, wherein the special purpose operating system
2 employs a microkernel and an associated service module.
- 1 24. (Original) The method of Claim 16, wherein the database server includes a
2 mechanism for reading resource information within an address space of a kernel of
3 the operating system without causing a context switch to the operating system kernel
4 address space.
- 1 25. (Original) The method of Claim 20, wherein said type of database usage is one of an
2 online transaction processing application and an online analytical processing
3 application, wherein said database appliance is configured with an amount of

resources dedicated to I/O services that is based on whether said specific type of database usage is an online transaction processing application or an online analytical processing application, and wherein said database appliance is configured with an amount of resources dedicated to computational services that is based upon whether said specific type of database usage is an online transaction processing application or an online analytical processing application.

26. (Original) The method of Claim 20, wherein said specific type of database usage is an online transaction processing application and said database appliance is configured with relatively more resources dedicated to I/O services and relatively fewer resources dedicated to computational services.

27. (Original) A method for constructing a database appliance, comprising:
installing on a computer readable medium accessible to one or more processors an operating system; and
installing on the computer readable medium a database server generated from another database server by modifying the code of said other database server to optimize the code for execution on said database appliance,
wherein the database server obtains services of said operating system by making calls to said operating system during execution of said database server.

28. (Original) The method of Claim 27, wherein said operating system is a special purpose operation system whose code has been optimized for use as part of said database appliance.

29. (Original) The method of Claim 27, wherein the method further comprises:

installing on the computer readable medium a self-configuration module that is
capable of performing the steps of:
detecting an environment in which the database appliance is being used; and
configuring the database appliance based upon the detected environment.

30. (Original) The method of Claim 27, wherein the database appliance allocates a CPU
share for a process and assigns a priority to the process based on the changing
resource demands associated with the process.

31. (New) The database appliance of Claim 1, wherein the step of modifying the general
purpose operating system includes adding one or more features to the general purpose
operating system, and wherein the one or more features are used to provide said set of
services to the database server.

32. (New) The database appliance of Claim 1, wherein the step of modifying the general
purpose operating system includes removing one or more features of the general
purpose operating system that are not required to provide said set of services to the
database server.

33. (New) The method of Claim 16, wherein the step of modifying the general purpose
operating system includes adding one or more features to the general purpose
operating system, and wherein the one or more features are used to provide said set of
services to the database server.

34. (New) The method of Claim 16, wherein the step of modifying the general purpose
operating system includes removing one or more features of the general purpose
operating system that are not required to provide said set of services to the database
server.